NOAA National Weather Service Air Quality Program

National Air Quality Awareness Week

The National Weather Service (NWS) and the U.S. Environmental Protection Agency (EPA) urge Americans to "Be Air Aware" during Air Quality Awareness Week, which runs from May 2 through May 6, 2011.

The goal of Air Quality Awareness Week is to provide information on outdoor air pollution and its impact on the quality of the air we breathe. A different air quality topic will be addressed each day, from the causes of poor air quality and how air quality predictions are made, to how to protect yourself on poor air quality days, and steps you can take to improve the cleanliness of the air we breathe.

For more information on Air Quality Awareness Week, please go to NWS Air Quality Awareness (www.airquality.noaa.gov).

Our Nation's Air Quality Forecast Capability

Have you checked the NWS' air quality forecast guidance lately? Exposure to ozone and fine particulate matter is responsible for tens of thousands[1] of premature deaths each year in the US. For the last few years, the NWS, in conjunction with the EPA, has produced forecast guidance out to 48 hours for predicted surface ozone concentrations and smoke throughout the lower 48 states (CONUS) that were recently extended to Alaska, and Hawaii.

NOAA NWS' hour-by-hour forecast guidance, at 12km grid resolution, shows when and where predicted values of ozone and smoke are expected to reach harmful levels, whether in cities, suburbs or rural areas alike. Our goal is to provide the United States with ozone, particulate matter and other pollutant forecasts with enough accuracy and advance notice to allow people to take action to prevent or reduce adverse effects.

Ozone forecasts are produced with a linked numerical predictions system: North American Mesoscale (NAM) model hydrometeorological predictions drive the Community Multiscale Air Quality (CMAQ) model developed by NOAA researchers for the US EPA. EPA provides the information on pollutant emissions and monitors data on ground-level ozone and fine particles used in the verification and evaluation of developmental products.

The Smoke Forecast Tool integrates NOAA's National Environmental Satellite, Data, and Information Service's (NESDIS) satellite information on the location of wildfires, with NWS weather inputs from its NAM model, and smoke dispersion simulations from NOAA's Office of Oceanic and Atmospheric Research's HYSPLIT model, to produce a daily 48-hour prediction of smoke transport and concentration. The model also incorporates U.S. Forest Service estimates for wildfire smoke emissions based on vegetation cover.

[1] Perhaps 60,000 (Kaiser, Science 2005)

State and local air quality forecasters, for more than 400 communities across the US, interpret NWS guidance, along with pollution monitoring data and other inputs, to provide next-day alerts of impending poor air quality. Alerts for roughly 100 of those communities are based on both expected high concentrations of ozone and fine particulate matter, with alerts for the remainder based on ozone only.
Our NWS Weather Forecast Offices (WFOs) and our National Centers for Environmental Prediction (NCEP) are encouraged to share their weather expertise in coordination with their corresponding state and local air quality forecasters. Since the initial operational implementation of NWS' air quality forecast guidance in 2004, NWS forecasters have been increasing their working partnerships with state and local air quality forecasters.

NWS Air Quality Forecast Guidance is available on the web at http://www.weather.gov/aq/.

Expanded coverage with experimental ozone and dust predictions, from coast to coast, is available on http://www.weather.gov/aq-expr.

Detailed information on our Air Quality Forecasts is available at http://www.weather.gov/ost/air_quality/.

If you have questions on NWS' Air Quality Program, please feel free to contact Jannie Ferrell, our NWSH OCWWS' Fire and Public Weather Services Branch Air Quality Outreach Coordinator, at jannie.g.ferrell@noaa.gov (301-713-1867 x 135), OR Ivanka Stajner, our NOAA/NWS/OST Acting Manager, Air Quality Forecast Capability, at ivanka.stajner@noaa.gov (301-713-9001 x185), OR Tim McClung, our NWS Manager, Air Quality Forecast Capability, at tim.mcclung@noaa.gov (301-713-3557 x169).